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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,109	04/14/2004	Douglas D. Coolbaugh	BUR920030083US1	3108

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EXAMINER

FULK, STEVEN J

ART UNIT	PAPER NUMBER
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2891

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/709,109	Applicant(s) COOLBAUGH ET AL.	
	Examiner Steven J. Fulk	Art Unit 2891	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed August 2, 2006, which amends claim 1, cancels claims 13-18 and adds claims 19-22, has been entered. Claims 1-12 and 19-22 are currently pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-12 and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Petit '264.

Regarding claims 1, 6 and 7, Petit discloses a method of forming a precision resistor on a semiconductor substrate (col. 3, lines 29-65; col. 4, lines 5-9) comprising forming a first resistor (fig. 3, R1) in a first region of a semiconductor substrate; forming a plurality of second resistors (fig. 3, R1-1 – R1-8) in a second region of the substrate, the plurality of second resistors comprising individual resistors, the individual resistors ranging in value about a desired value; measuring the value of the first resistor (col. 7, lines 22-24); comparing the measured value to a target value (col. 4, lines 42-50); and selecting at least one of the individual second resistors corresponding to the result of the comparison to provide a precision resistors that has the target value using the desired value of the selected resistors as an offset (col. 7, lines 16-27).

Regarding claims 2 and 19, the reference further discloses the plurality of second resistors comprise one resistor having a nominal value about equal to the desired value, another resistor having a value of about 10 % less than the desired value, and a further resistor having a nominal value of about 10 % greater than the value of the desired resistor (col. 4, lines 42-57; target value of 110 ohms, measured range is about 92-128 ohms; thus second resistors adjust main resistor about +/-10% to reach target of 110 ohms).

Regarding claims 3 and 20, the reference discloses wherein when the measured value of the first resistor is greater than the target value, the resistor having a nominal value of about 10 % less than the desired value is selected (col. 4, lines 42-57; adjustment made if measured value is greater than 110 ohms).

Regarding claims 4 and 21, the reference discloses wherein when the measured value of the first resistor is less than a predetermined target value, the resistor having a nominal value of about 10 % greater than the desired value is selected (col. 4, lines 42-57; adjustment made if measured value is less than 110 ohms).

Regarding claims 5 and 22, the reference discloses wherein when the measured value of the first resistor is equal to the predetermined target value, the resistor having a value about equal to the value is selected (col. 7, lines 16-17; target value left unchanged if at desired value).

Regarding claims 8 and 9, the reference discloses the plurality of second resistors comprises three resistors arranged in parallel to each other (fig. 3, R1-1 – R1-4; col. 3, lines 29-32).

Regarding claim 10, the reference discloses the plurality of second resistors to be linked by fusible links (col. 3, line 66 – col. 4, line 4).

Regarding claim 11, the reference discloses the comparing to be performed electronically (col. 7, line 61 – col. 8, line 13; test program compares measured value to target value).

Regarding claim 12, the reference discloses the selecting to include a step of removing other second resistors that are not selected by blowing fusible links or by fusing antifuses that are present within the plurality of second resistors (col. 8, lines 14-36).

Response to Arguments

4. Applicant has amended claim 1 to overcome the objection set forth in the previous action. Therefore, the objection to claim 1 has been withdrawn.

5. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection as set forth above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Imamura et al. '966, Ohata et al. '148, Dale '478, Audy '019, Naumov et al. '950, Swanson et al. '238, King '528 and Van Den Broek et al. '116 disclose methods of forming precision resistors on a semiconductor substrate by measuring the value of the resistor and selectively connecting second resistors to adjust the resistance of the precision resistor.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven J. Fulk whose telephone number is (571) 272-8323. The examiner can normally be reached on Monday through Friday, 9:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Baumeister can be reached on (571) 272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Art Unit: 2891

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SJF

Steven J. Fulk
Patent Examiner
Art Unit 2891

October 28, 2006


BRADLEY K. SMITH
PRIMARY EXAMINER